

# Macroeconomic Instability and Housing Finance: Thailand's Experience

by Dr. Somchai Richupan

It is increasingly obvious that the housing sector is closely connected to the overall economy. Macroeconomic instability has a negative effect on the housing market and housing finance, and vice versa. The economic crash in Thailand in 1997 clearly shows such an effect. It also provides painful experiences and lessons not only to Thailand but also to the international community.

This article reviews the macroeconomic instability in Thailand and its effects on housing market and housing finance. The over-supply of housing, ignoring warning signs, roles played by the government and speculation are addressed. It will further discuss strategies of the government and financial institutions in responding to the crisis. Finally, the article will attempt to anticipate the future challenges of the Thai housing sector and the Government Housing Bank in particular.

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## THAI ECONOMY: FROM SUCCESS TO FAILURE

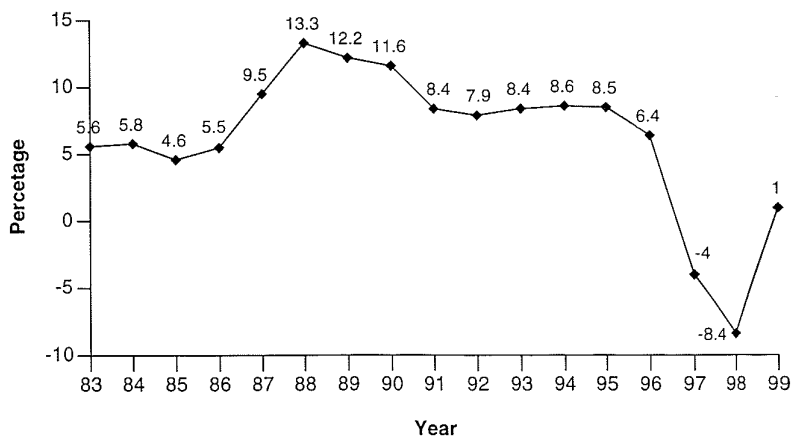
### The Success of Thai Economy

The success of Thailand's economy during the years 1986–1995 was praised worldwide for its continuous high growth rates of about 9% annually. In the three-year period between 1987–1989, the GDP grew at extra-

ordinary double-digit rates, one of the highest growth rates in the world. (See Figure 1.) These high growth rates were achieved mainly due to the increase of foreign investment in the country and high export growth.

The Stock Exchange of Thailand (SET) index soared dramatically from about 389 at the end of 1988 to the record high of 1,683

Figure 1. Growth Rates of Gross Domestic Products, 1983–1999.



Source: Bank of Thailand

in 1993, a nearly fourfold increase, reflecting a high compounded growth rate of about 34% annually. (See Figure 2.) Likewise, the turnover of stock trading rose sharply from about 156 billion Baht in 1988 to its peak of about 2,200 billion Baht in 1993.

The success of the Thai economy was influenced by various factors such as cheap labor, political stability, Baht stability and abundance of natural resources. Thailand experienced a huge increase in direct foreign investments, which played an increasingly major role and contributed to the economic development in Thailand. As more investments came in to build factories in Thailand, the economy transformed itself from a labor-intensive agricultural economy to a high-skill manufacturing and service economy oriented to exports.

The country's competitive edge shifted from its advantages in labor and raw materials to its geographical position as the regional hub of industry and financial activities. In this respect, the period of the early 1990s saw a

major reorientation of national policy in Thailand towards liberalization and internationalization of the Thai financial and economic system. Financial deregulation and liberalization were launched with a view to improving the benefits of the operation of the financial system.

The success of the Thai economy, together with the government liberalization policies and the free Thai market, was recognized and admired worldwide.

#### The Failure of Thai Economy

In 1995-1996, signs of economic trouble in Thailand began to surface. The trade balance plunged significantly, reaching a low point of a \$16.1 billion deficit. The current account deficit widened to as much as 8% of GDP. Short-term foreign debts in the private sector rose sharply, while the foreign capital started to flow out of the country.

The housing and real estate industry, one of the major engines for the past growth, was

obviously driven by speculation and was in a state of oversupply. The stock market, another engine of economic growth, was apparently driven by speculation. When the speculation stopped, the stock index dropped steadily. Despite warning signs of the economic problem, both the authorities and the private sector were unaware of the situation. Most of them still believed that the Thai economy would continue to grow.

The bubble economy and the weaknesses of the financial sector undermined foreign investors' confidence. This loss of confidence intensified when economic fundamentals deteriorated further, especially declining export growth, the downturn in the real estate sector and continued financial sector problems.

Meanwhile, the U.S. dollar appreciated against other major currencies, causing the Baht to appreciate further, and the U.S. dollar/ Baht exchange rate in the market became very volatile. Thus, many foreign investors lost confidence in Thai currency. On July 2, 1997, after speculative attacks on the currency, the Thai government was forced to abandon its pegged currency exchange rate system and allowed the Thai Baht to float. The Baht was depreciated continuously from 25 Baht per one U.S. dollar prior to the floatation to its peak of about 54 Baht per dollar in January 1998. (See Figure 3.)

Pressured by the depleted foreign reserves, the government sought financial assistance from the International Monetary Fund (IMF) for a rescue loan package worth \$17.2 billion. In late 1997, the economy contracted at a frightening speed caused by a decline in both domestic and regional economic activities. Most of the Thai companies reported a steep fall in production levels and faced massive losses during the years 1997-1998. As a result, the GDP plummeted from positive growth of 6.4% in 1996 to negative growth of 4% in 1997 and drove down further to negative growth of 8.4% in 1998.

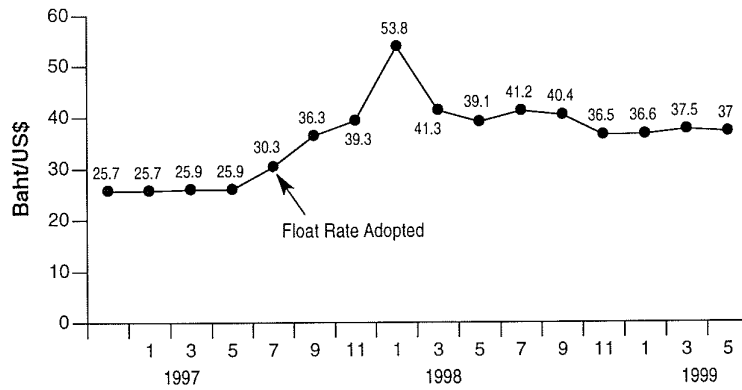
Figure 2. Stock Exchange of Thailand Index and Property Index



Property Index = SET Index for Property Sector

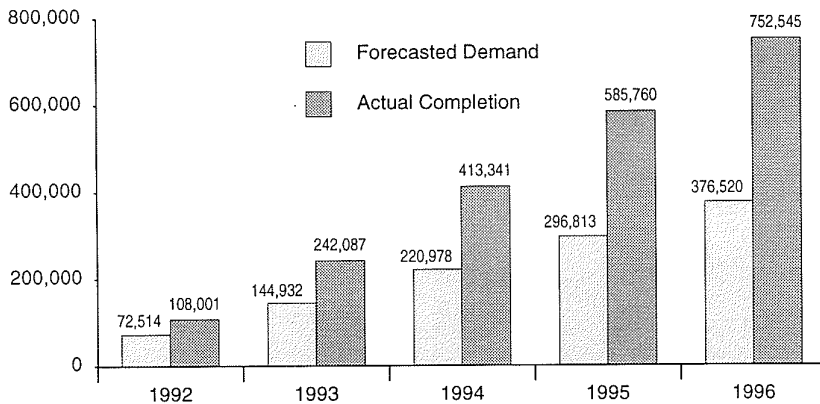
Source: Bank of Thailand

Figure 3. Average Exchange Rates, January 1997 to Present



Source: Bank of Thailand

Figure 4. Cumulative Housing Completion in Bangkok Metropolitan I



Source: GHB, NESDB

**HOW DID HOUSING AND REAL ESTATE CONTRIBUTE TO THE BUBBLE ECONOMY?**

During 1987–1996, the Thai economy grew at an annual rate of more than 8%. The SET

index of the property sector increased tremendously from just about 91 at the end of 1988 to about 2,300 at the end of 1993. This growth, combined with the availability of housing finance, resulted in an explosive housing boom. Fed by the easy availability

of finance, private developers started to increase their leading role in housing construction.

During 1992–1996, housing completions in the Bangkok Metropolitan Region expanded enormously to a total of 752,545 units (an average of 150,509 units per year), whereas the demand forecast by the National Economic and Social Development Board was only 376,520 units for the same period. This clearly indicates the over-investment in housing. (See Figure 4.)

Moreover, the excessive speculation by home buyers resulted in a huge oversupply of housing in the Bangkok Metropolitan Region. It was estimated by GHB that a total of about 300,000 housing units in Bangkok Metropolitan Region, or about 14% of the total housing stock, were unoccupied at the end of 1995. This rapid expansion in the housing sector and the real estate market were unchecked and contributed to the bubble for the entire economy.

Over-investment and inefficient operation of the housing market can be explained by several factors, such as easy access to loans, inadequate bank monitoring and supervision, easy entry of unqualified developers, absence of functioning property taxes, excessive speculation, unprofessional property valuation, absence of clear guidelines and inadequate housing information.

**Easy Access to Bank Loans**

During the last decade, particularly after the financial liberalization and the introduction of Bangkok International Banking Facilities (BIBF) in 1992, developers could access bank loans very easily due to the flood of cheap funds from abroad. This led to excessive investment in real estate and housing development.

In addition, the risk weight of home loans for capital adequacy ratio is established at only

50%, according to the BIS guidelines. This encouraged the financial institutions to compete aggressively in mortgage lending. Consequently, loans for housing development as well as home mortgage loans to individual borrowers increased very rapidly, pushing the overall economy to bubble. In 1989, the growth rate of housing development loans was as high as 80%, and on the average, housing development lending grew at about 34% annually during the period of 1988 to 1996. (See Figures 5-8.)

**Inadequate Bank Monitoring and Supervision**

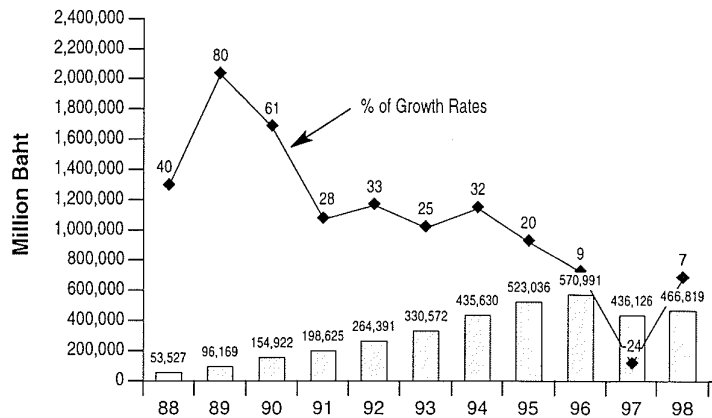
For many years housing development loans were mainly provided by commercial banks, which held a share of about 68% in 1992. After that, the commercial banks reduced their loans for housing development; their market share dropped gradually due to the warning and intervention of the Bank of Thailand.

However, many developers turned instead to finance companies for the loans. Consequently, the share of the finance companies, many of which were subsidiaries of the commercial banks, in housing development loans soared from 29% in 1992 to 46% in 1996. (See Figure 6.) Most finance companies extended credits to a large number of unsound projects, creating adverse selection and over-lending. This was one of the major causes of massive bad debt and insolvency of 56 finance companies. This reflects inadequate monitoring and timely supervision to enforce lending discipline on finance companies by the Bank of Thailand.

**Easy Entry of Unqualified Developers**

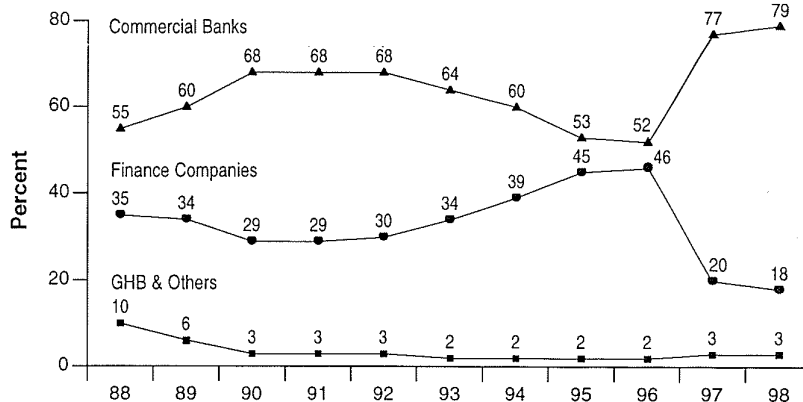
During the boom period of the economy, the prices of land and residential properties increased rapidly, inducing a large number of inexperienced developers to enter the mar-

**Figure 5. Expansion of Housing Development Loans Out**



Source: Government Housing Bank

**Figure 6. Market Share of Housing Development**

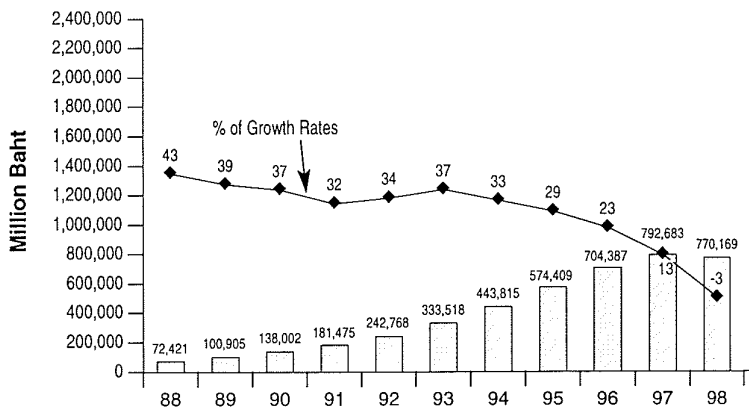


Source: Government Housing Bank

ket without restricted regulation and control based on their qualifications and prior performance. For example, more than 50% of the real estate developments in provincial areas deliberately avoided land and housing permission from the authority, creating

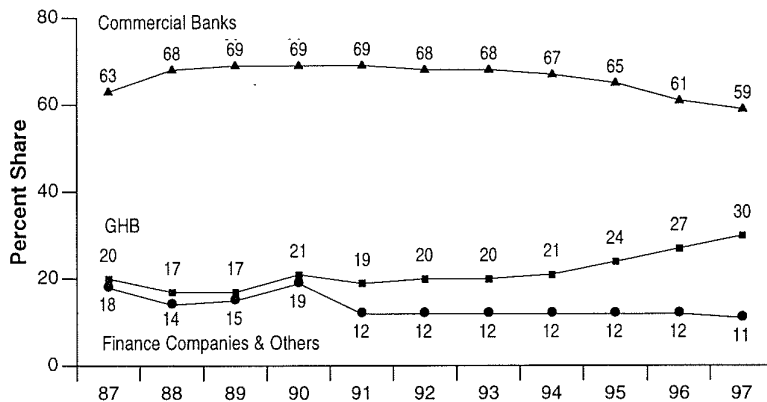
many substandard land and housing projects. It is estimated that more than 2,000 development companies operated in Bangkok alone. The developer-built housing units in Bangkok Metropolitan Region increased rapidly to 83% in 1996.

Figure 7. Expansion of Home Loans Outstanding



Source: Government Housing Bank

Figure 8. Market Share of Home Loans Outstanding (Value 98 = 770,169 million Baht)



Source: Government Housing Bank

**Excessive Speculation**

During the boom period, there was excessive speculation by home buyers, due to the rapid increase in property prices. Aiding this was an inadequate tax system; particularly

since a functioning property tax had not yet been introduced to discourage speculation. This led to a large number of land speculations and unoccupied housing units. As a result, a huge amount of capital was sunk deeply into the real estate sector

and became unproductive and inefficient investment.

**Unprofessional Property Valuation**

Poor practice in property valuation due to the lack of well-qualified appraisers and no appraiser licensing law led to negligent overvaluation of mortgaged property. As a result, home mortgage loans were offered in very high percentages of the real market value of the property, causing the increased NPLs and loan losses after mortgage foreclosure, particularly during the downturn housing market.

**Inadequate Housing Information**

Even though the GHB has produced housing statistics for years, key information that reflects the performance of the housing market, such as housing starts, sales volume, movement of house prices and NPL of mortgage loans, are insufficient and incomplete. This limits the government's ability to closely monitor the current housing market conditions and to introduce the appropriate housing and housing finance policy for the efficient operation of the markets. The lack of adequate housing statistics prohibited the sending of strong and early warning signals to developers as well as financial institutions.

**BUBBLE BURST EFFECT ON REAL ESTATE AND HOUSING**

**Runs on Financial Companies and Small Commercial Banks**

The Thai financial system started to face its difficulties by the end of 1996. The Bank of Thailand's decision to impose management control on the Bangkok Bank of Commerce immediately drew the public's attention to the problems of financial institutions. Rumors spread that many finance companies had overextended loans, faced huge bad debts and would become insolvent.

Fearing that the failure of financial institutions would create systemic financial disruption, the Thai government did not allow them to fail and create losses for the creditors. Thus, the Bank of Thailand loaned an amount of 400,000 million Baht to the finance companies, hoping to prevent the crash of the overall financial system. This "too big to fail" policy posed the main problem; it increased the incentives for "moral hazard."

When it became clear that 56 finance companies were actually insolvent (and later were suspended by the Bank of Thailand), the run on the remaining finance companies and some small and weak commercial banks occurred. The domino effect spread widely and caused many remaining financial institutions to fall.

**Credit Crunch and High Interest Rates**

Most developers could not obtain further construction loans from financial institutions to complete their projects due to the massive liquidity crunch. Many developers simply discontinued their work or stopped new construction, leaving many home buyers who had already made downpayments very depressed. In addition, many home buyers could not afford to get loans from financial institutions due to the very high interest rates and the tightened underwriting criteria.

Since the economic meltdown in mid-1997, the real estate and housing market in Thailand has been in a severe slump. Most housing developers, both listed companies in the SET and non-listed firms, were vulnerable. Not only did the developers suffer, but they pulled down mortgage lenders and related sectors such as construction contractors and building materials suppliers.

Real estate transactions fell dramatically because of the weak demand while there was a huge oversupply in the market. With less cash flow coming from sales, many develop-

ers faced serious liquidity problems and were unable to repay mortgage debt to lenders, further damaging the banking system.

**Depressed Stocks in the Property Sector**

During the crisis, the real estate sector faced huge losses due to the contraction in sales and higher construction costs. Moreover, due to the excessive oversupply in housing and lower purchasing power of home buyers, land and house prices in Bangkok and many areas of the country dropped at least 30% from the peak.

The financial crisis forced finance companies to sell collateralized property at steep discounts, thereby aggravating the supply situation and creating a serious negative effect not only on the developers but also on mortgage lenders. Nearly all developers were vulnerable to distress selling and had negative cash flow. As a result, SET index for the property sector in the stock market plummeted from its peak of about 2,300 prior to the crisis to 96 at the end of 1997. It remained lower than 100 until 1999.

**Contraction of Housing Projects**

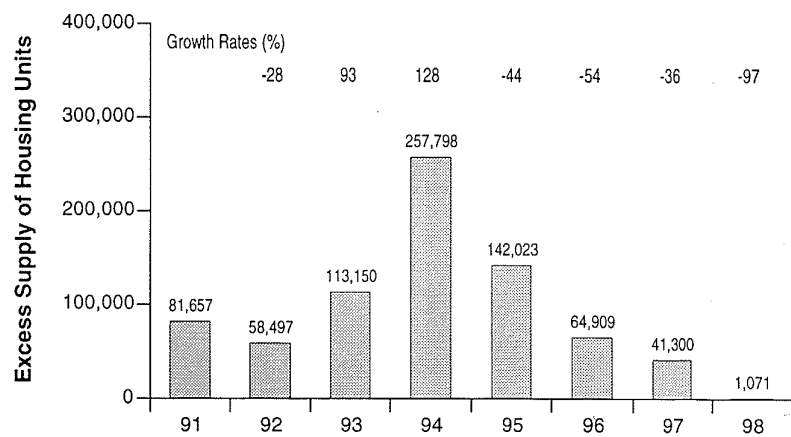
After the bubble burst, the housing market was in a severe downturn. Very few housing projects were launched in the market in Bangkok and other areas. In the Bangkok Metropolitan Region, only 41,300 new units were opened for sale in 1997, and the number fell to only about 1,000 units in 1998, compared to the peak of 258,000 units in 1994. (See Figure 9.)

Housing demand also fell significantly due to the decreased purchasing power caused by the economic downturn and lowered income of the people after 1997. This will prolong the rebalancing of the housing market supply and demand for another three-four years unless some corrective measures are taken to promote more affordability for housing purchasing.

**Excess Supply of Housing Units**

Although the number of newly built housing units dropped rapidly after the crisis, there was still a large excess housing supply. In

Figure 9. Housing Units Newly Launched for Sale in Bangkok Metropolitan Region



Source: GHB

Bangkok Metropolitan alone in 1998, there were about 264,000 unsold units in the hands of developers and another 267,000 unoccupied units in the hands of the investors, ready to be released for sale in the market. The absorption of the oversupply has been slow due to the decline in purchasing power resulting from the severe contraction of the economy.

**Failure of Developers**

After the bubble burst, most developers faced a severe financial crisis due to the sharp decline in sales. Moreover, they were cash-strapped, due to the restraint on lending by financial institutions. This resulted in the discontinuation of their ongoing construction projects. These combined factors led to massive financial losses for developers. In the fiscal year of 1998, all housing developers listed in the stock market experienced a combined loss of about 28,000 million Baht.

**Decline of Property Transfers**

The economic crisis negatively affected income as well as employment, and this affected housing demand. In addition, there was evidence that many home buyers discontinued downpayments due to the loss of their job and the uncertainty of future income. As a result, the transfer of real property nationwide contracted significantly. In 1997 and 1998, the total volume of real property transfers dropped 39% and 45% respectively. This low rate of transfers is expected to continue in the next few years.

**HOW THE GOVERNMENT HOUSING BANK WEATHERED THE CRISIS**

**Foreign Exchange Losses of GHB**

In 1997, funding of the Government Housing Bank from offshore borrowing was about 10% of its total funding. After the Baht flota-

tion, GHB suffered substantial losses from foreign exchange of about 2,500 million Baht in 1997 and another 2,600 in 1998, affecting its net profits significantly.

**Period of Rescuing the Property Market**

In the crisis year of 1997, the property market was severely depressed. In order to boost housing demand and help relieve the real estate crisis, the government introduced the "Home Loan Scheme Under Real Estate Rehabilitation Program." Under the program the Government Housing Bank, with funding from the BOT, was directed to provide subsidized home loans worth 10,000 million Baht at a 9% fixed interest rate (compared to the prevailing rate of about 12%) for a repayment period of up to 30 years.

This amount was used up within three days. The program enabled GHB to extend loans while the housing market was depressed and loans extended by other financial institutions were minimal. This caused the market share of new home loans of the Govern-

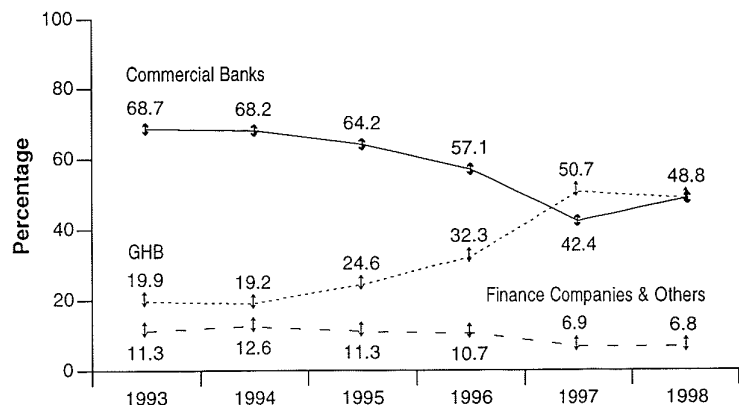
ment Housing Bank in 1997 to reach the record high of 51%, compared to 32% in the previous year. (See Figure 10.)

In 1998, most financial institutions tightened lending activities due to the liquidity crunch. As a result, mortgage rates rose dramatically to 18%–19%. Under the circumstances, a large number of home buyers could not obtain home loans from the mortgage lenders.

However, the GHB continued to provide home loans with the lowest lending rates in the market. Thus, GHB has made borrowing more accessible and more affordable to a large number of home buyers, helping to relieve the credit crunch and real estate crisis. (See Figure 11.)

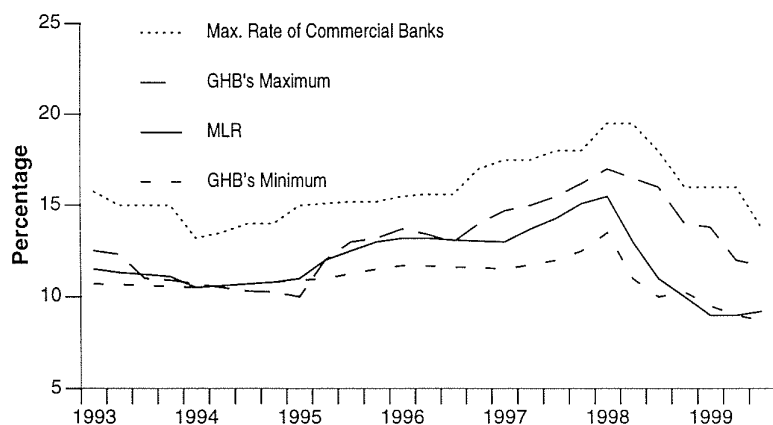
During the crisis, GHB was the leading housing finance institution and played a central role in housing finance, since mobilization of loanable funds through deposits and bond issuance was available almost exclusively to GHB. However, funds raised during

Figure 10. Market Share of New Home Loans



Source: GHB

Figure 11. GHB and Commercial Banks' Mortgage Rates (1993 to July 6, 1999)



MLR = Minimum loan rate of 5 large commercial banks

Source: GHB

this credit crunch period bore very high interest rates. For instance, the Bank issued the two-year bond valued at 5,000 million Baht at the coupon rate of 15.5% in 1998.

Due to the credit crunch, credits were not available from other mortgage lenders; thus most borrowers turned to the GHB. In order to cope with the substantial increase in demand for loanable funds from the GHB, the Bank had to impose strict lending criteria. Among these were, for example, no lending to purchase empty plots, no refinancing from other banks and no lending to the upper income group.

#### Challenge to the GHB After the Dust Settled

By early 1999 the overall economy had been stabilized and the financial sector had been reformed. Many financial institutions have successfully been recapitalized. The severe liquidity shortage has been eased. In July 1998, the high ratio of nonperforming loans

had already reached its peak and started to decline. As a result, many financial institutions have moved from massive tight liquidity to huge excess liquidity, causing deposit rates to drop sharply to about 3%–4%, the lowest rates in more than three decades.

Most banks have attempted to provide more loans to various sectors in order to relieve their huge excess liquidity. Since early 1999, home loans have been considered to be less risky than any other loans because it was anticipated that real demand rather than speculation now drives the purchase of houses. Thus, several banks have competed aggressively in extending home loans, including refinancing, by offering very low mortgage rates, even lower than the bank's minimum lending rate (MLR). Some banks offer at 6.5%–7.5% whereas the MLR is about 9.25%.

The intense competition has affected the GHB's current market leader position in

housing finance. A sizable number of GHB's customers have fled to seek better offerings in the low mortgage rates provided by other banks. In 1999 the GHB has targeted to provide loans at the total amount of 50,000 million Baht. However, the home loans provided for the first half of the year amount to 10,980 million Baht, which is only about 22% of the target.

During the crisis years of 1997 and 1998, many financial institutions became insolvent, and most of the commercial banks reported substantial losses, while the GHB continued to show a surprising net profits of about 3 billion Baht and 5 billion Baht respectively. However, due to the change in accounting practice imposed by the Bank of Thailand, the GHB is expecting a loss of about 10,000 million Baht in 1999, which will be the first time in the past two decades. However, in the year 2000 and forwards, GHB anticipates resuming profitability.

#### Transfer of Banking Supervision and Financial Audit

Prior to 1998, GHB, as a state-owned financial institution, was under the direct supervision of the Ministry of Finance, whereas all private financial institutions were under the supervision of the Bank of Thailand. However, since the financial crisis, the Ministry of Finance has altered its policy to empower the BOT to perform prudential audits for all financial institutions, including GHB, in order to standardize financial guidelines and the audit system.

#### Change in Accounting Practice and Recapitalization

Since 1998 GHB has opted to perform its operations in accordance with the BOT financial guidelines, including accounting practices in conformity with other banks. For instance, GHB has to provide a capital-to-risk-asset ratio of at least 8.5% and has to



make loan loss provisions as set by the BOT.

Affected by the crisis, GHB, like other banks, has experienced a high NPL ratio. As a consequence, GHB needs to increase by a large amount its provision for loan loss. Thus the government has decided to recapitalize the GHB from 10,000 million Baht prior to the crisis to 30,000 million Baht. At present, an amount of 5,000 million Baht has been already injected. The remaining amount of 15,000 million Baht will be granted by the end of 1999.

#### **GHB's Role in Reviving the Property Sector and Real Economy**

Recently, the Thai government has launched new economic packages to stimulate the overall economy. The housing industry has been utilized as one of the locomotive engines in reviving the economy. The new housing finance package is the key instrument to improve the housing market as well as to significantly change the mortgage lending environment.

The package has relied mainly on a bond-based system, instead of short-term deposits. This will help to prevent the mismatch in maturity between long-term mortgages and short-term deposits. The rollover mortgage system has been adopted in which the borrowers can borrow up to 30 years, but they can only select a period of time for three or five years during which the mortgage interest rate is fixed at 250 basis points over the cost of the GHB bond. During this period, they can prepay the mortgage but are subjected to certain prepayment penalties. At the rollover date they can select another period, again from either three or five years of fixed rate or else they can switch to the ordinary floating rate.

Under the program, the GHB plays a central role by solely issuing the new bonds with

maturity of three and five years. The bond is used to finance new mortgage loans. All commercial banks will be allowed to borrow funds from GHB's bond issues for their own mortgage lending under the same conditions as GHBs.

The program is expected to help reduce liquidity risks and to eliminate mismatch between the source and use of funds. The measure is also expected to reduce the mortgage lending rates and raise borrowing affordability and housing demand, which will help reduce housing oversupply. Thus, it will improve the current unbalanced housing market and stimulate the overall economy.

#### **THE FUTURE: REFORM OF GHB AND THAI FINANCE SECTOR**

As already discussed, it is clear that the instability of the macroeconomy, the housing sector and the financial sector are closely interrelated. The housing sector is recognized as one of the main engines for domestic growth, the anchor of social stability, and therefore an important part of macroeconomic condition.

The boom of the real estate and housing sector during 1987-1996 is one of the key factors leading Thailand to the bubble economy. On the other hand, the burst of the economic bubble during 1997-1998 has resulted in a severe downturn in the real estate and housing sector. The subsequent collapse in the stock market and housing market has led the country into its most severe economic crisis since the second World War.

During the initial stage of the crisis, the Thai government had to solve several grave problems simultaneously, ranging from stabilizing the Baht to raising international reserves, stopping capital outflows, restructuring the financial system and restoring the paralyzed economy.

Currently, Thailand has already passed this very difficult stage. The national economy and the housing sector are showing signs of improvement, evidenced by several positive economic indicators. The growth rate of 1999 has been revised upward to 3%-4% compared to the original forecast of 1% while the inflation rate is contained at 1%. The foreign exchange rate has remained relatively stable at about 36-37 Baht per U.S. dollar since late 1998. The country's current account has turned to be a surplus of \$14.2 billion in 1998 and will continue to be a surplus at a comparable amount in 1999. The liquidity in the financial sector has improved substantially. The NPLs of the financial sector have bottomed out. The financial institutions have started to compete for mortgage lending with very low interest rates, even lower than the MLR.

Nevertheless, under the new environment, the Thai housing finance sector and the GHB have to face new challenges.

#### **Strengthening Credit Analysis**

The rising NPLs were caused not only by the economic turmoil and the real estate cycles but also by the careless and unsound underwriting practices of loan officers. This was a painful lesson to all financial institutions, including GHB. From now on, it is essential for mortgage lenders to put more emphasis on sound and prudent mortgage underwriting, particularly the improvement of credit analysis.

In order to strengthen sound credit analysis in the financial system, the Ministry of Finance in 1999 introduced the creation of a national credit bureau. Hence, the Thai Credit Bureau was established in July 1999, and GHB is the core institution in its establishment.

In addition, the Thai Housing Finance Association is now in the process of developing

standardized mortgage underwriting and uniform loan documentation principles to be used as a guideline for all mortgage lenders for the improvement of sound mortgage lending.

**Improvement of Asset-Liability Management**

To be viable in the future, the GHB is adjusting itself to suit the rapidly changing environment in the globalizing world. Instead of relying on a deposit base as a key source of funds (and on which Thailand successfully operated for nearly two decades), the country now shifts to a new paradigm to improve asset-liability management.

The government's introduction of the fixed rollover mortgage system, in which lending rates are derived from the cost of bond issuance, will be one of the major instruments that allows mortgage lenders to effectively manage asset liability and reduce liquidity risks, thus avoiding the mismatching of funding and lending.

**Property Valuation**

Nearly all mortgage lenders have experienced huge losses from foreclosure on defaulted mortgage loans. This resulted not only from the cyclical fluctuation of the property cycle but also from unsound and unprofessional valuation practices. During the boom period, many collateral valuations were appraised in excess of their actual market values due to the speculation that property prices would increase indefinitely, which is incorrect.

Now GHB and other institutions have been increasingly aware of the importance of property valuation in mortgage lending. The valuation practice has been improving, and more training programs have been offered for appraisers.

In addition, the two professional appraiser associations, namely the Valuers Associa-

tion of Thailand and the Thai Valuation Association, have been strengthening. Valuation Standards of Practice and the Code of Ethics have recently been introduced. Nevertheless, Thailand still lacks a needed valuers licensing law.

**Housing Information System**

Since 1995 GHB has been playing a central role in providing housing information to all concerned parties through a free subscription to GHB's quarterly journal, which provides essential information for financial institutions, developers and others to be able to closely monitor the housing and real estate market situation.

However, some key information is missing, such as housing starts, housing sales, housing price index and overall NPLs in the housing finance sector. The missing information needs to be developed. An accurate and timely information system will give the concerned parties early warning signs, which will enable them to avoid future over-investment and to introduce appropriate policies, as well as to promptly take necessary corrective actions.

**Secondary Mortgage Market**

The sound development of a secondary mortgage market is crucial to the development of a healthy bond market and housing financial system by matching long-term funding to meet the demand for long-term home financing. The recent passage of two laws regarding securitization, namely "Emergency Decree on Special Purpose Juristic Persons for Asset Securitization 1997" and "Emergency Decree on Secondary Mortgage Corporation 1997" in July 1997 will help promote secondary mortgage market and securitization activities, as well as strengthen long-term debt instruments.

The Secondary Mortgage Corporation (SMC) was established in early 1998 as a

state enterprise under the Ministry of Finance to support securitization and the home loan market by purchasing mortgage loans from financial institutions. The SMC has recently purchased a small amount of mortgage loans from only a few financial institutions.

Currently, most financial institutions are still reluctant to sell their performing home loans to the SMC for fear that the high prevailing NPL's ratio will increase even more. So, it is a challenge to the SMC to introduce appropriate purchasing programs that suit the existing environment and become more attractive to mortgage originators.

**Profit Centers**

Currently, the GHB is improving its efficiency through various mechanisms. The profit center concept is strongly implemented in order to improve the efficiency of its operation and develop a new compensation system based on productivity and profits earned. All departments are categorized either as profit or cost centers.

The profit centers are responsible for maximizing revenues while minimizing expenses. The cost centers must be cost-efficient units, supporting profit centers. The performance evaluation will be conducted each year and the reward system will be based on the quantitative measurement such as the return on asset (ROA) of individual profit centers.

In conclusion, GHB is confident that it will quickly learn from past mistakes and successfully overcome these new challenges, as discussed. Eventually, the Thai economy, the housing market and the housing finance system will be fully recovered and move ahead, not with high speed, but with a more prudent, more stable and sustainable growth.